

CLAIMS:

1. Device for recording information, the information including real-time data of a real-time data stream in accordance with a predefined recording format, which device comprises
 - recording means (22) for recording marks in a track on a record carrier representing the information in blocks having logical addresses, and
 - control means (20) for controlling the recording by locating each block at a physical address in the track, the control means comprising
 - addressing means (31) for translating the logical addresses into the physical addresses and vice versa in dependence on allocation information,
- 5 10 - allocation means (32) for generating and maintaining the allocation information, the allocation information including at least one logically contiguous range of blocks allocated to at least a part of the real-time data stream, and
 - auxiliary data means (34,33) for processing auxiliary data related to the real-time data and for recording the auxiliary data as auxiliary blocks on the record carrier,
- 15 20 the auxiliary data means being coupled to the allocation means for assigning physical addresses to the auxiliary blocks, which physical addresses of the auxiliary blocks are excluded from allocation to logical addresses and are within or near a physical address range corresponding to the at least one logically contiguous range of blocks allocated to the said part of the real-time data stream.
2. Device as claimed in claim 1, wherein the auxiliary data means (34,33) comprise
 - meta-data means (34) for generating and maintaining meta-data for controlling the rendering of the real-time data stream and for recording at least part of the meta-data relating to said part of the real-time data stream on the record carrier after recording said part of the real-time data stream, and
 - recovery means (33) for generating recovery data for enabling a retrieval of real-time data for which corresponding meta-data has not been recorded and for recording the recovery data in the auxiliary blocks.

3. Device as claimed in claim 2, wherein the recovery means (33) are arranged for recording recovery status information at a predefined location on the record carrier.
- 5 4. Device as claimed in claim 2, wherein the device comprises a non-volatile memory, and the recovery means (33) are arranged for storing recovery status information in the non-volatile memory.
- 10 5. Device as claimed in claim 3 or 4, wherein the recovery means (33) are arranged for generating the recovery status information including pointer information for indicating a location of a recovery block.
- 15 6. Device as claimed in claim 2, wherein the recovery means (33) are arranged for generating recovery data for recovering allocation information which has not been recorded.
- 20 7. Device as claimed in claim 2, wherein the auxiliary data means (34,33) are arranged for including in the auxiliary blocks a unique signature and/or pointer information to other auxiliary blocks.
- 25 8. Device as claimed in claim 1, wherein the auxiliary data means (34,33) are arranged for controlling the allocation means for allocating at least two consecutive physical addresses to the auxiliary blocks.
- 30 9. Device as claimed in claim 1, wherein the auxiliary data means (34,33) are arranged for controlling the allocation means for allocating physical addresses for auxiliary blocks in dependence on defect management information, in particular by allocating physical addresses in a defect management area or by allocating physical addresses near bad blocks.
10. Device as claimed in claim 2, wherein the recovery means (33) are arranged for controlling the allocation means for de-allocating physical addresses previously allocated to the recovery blocks for said part of the real-time data stream after recording of the meta-data corresponding to said part.

11. Device for reading information, the information including real-time data of a real-time data stream in accordance with a predefined recording format, which device comprises
 - reading means (30) for reading marks in a track on a record carrier representing the information in blocks having logical addresses, and
 - control means (20) for controlling the reading by locating each block at a physical address in the track, the control means comprising
 - addressing means (31) for translating the logical addresses into the physical addresses and vice versa in dependence on allocation information, the allocation information including at least one logically contiguous range of blocks allocated to at least a part of the real-time data stream, and
 - auxiliary data read means (37,38) for processing auxiliary data related to the real-time data and for reading the auxiliary data as auxiliary blocks from the record carrier, the auxiliary data blocks having physical addresses that are excluded from allocation to logical addresses and are within or near a physical address range corresponding to the at least one logically contiguous range of blocks allocated to the said part of the real-time data stream.
12. Device as claimed in claim 11, wherein the auxiliary data read means (37,38) comprise
 - meta-data read means (38) for controlling rendering of the real-time data stream in dependence on meta-data and for reading the meta-data relating to said part of the real-time data stream on the record carrier, and
 - recovery means (37) for reading recovery data from the auxiliary blocks and for retrieving real-time data for which corresponding meta-data has not been recorded in dependence on the recovery data.
13. Method of recording information in a track on a record carrier, the information including real-time data of a real-time data stream in accordance with a predefined recording format, which method comprises
 - recording the information in blocks having logical addresses, and
 - controlling the recording by locating each block at a physical address in the track, which controlling comprises

- translating the logical addresses into the physical addresses and vice versa in dependence on allocation information,
- generating and maintaining the allocation information, the allocation information including at least one logically contiguous range of blocks allocated to at least a part of the real-time data stream,
- processing auxiliary data related to the real-time data and for recording the auxiliary data as auxiliary blocks on the record carrier, and
- assigning physical addresses to the auxiliary blocks, which physical addresses of the auxiliary blocks are excluded from allocation to logical addresses and are within or near a physical address range corresponding to the at least one logically contiguous range of blocks allocated to the said part of the real-time data stream.

14. Method as claimed in claim 13, wherein the step of processing auxiliary data comprises

15. - generating and maintaining meta-data for controlling rendering of the real-time data stream, and recording at least part of the meta-data relating to said part of the real-time data stream on the record carrier after recording said part, and

- generating recovery data for enabling retrieval of real-time data for which corresponding meta-data has not been recorded, and recording the recovery data in the auxiliary data blocks.